X_5 is an amino acid selected from the group consisting of I, L, and V;

X_6 is an amino acid selected from the group consisting of M;

X_7 is an amino acid selected from the group consisting of D, E, H, K, and R; and

X_8 is hydrogen, a carboxyl-terminal blocking group, or one to twenty amino acid residues.

REMARKS

The present invention relates to compositions and methods for internalization and degradation of urokinase-type plasminogen activator.

Claims 1-24 are pending in the present application. More specifically, claims 11-16 and 21-24 have been withdrawn from consideration as being drawn to a non-elected invention, and claims 5-10 and 17-19 are canceled herein. Therefore, upon entry of the instant Amendment, claims 1-4 and 20 will be under consideration in this application. A copy of claims 1-4 and 20 is enclosed for the Examiner's convenience.

Claim 1 has been amended herein to more particularly point out and distinctly claim the subject matter, which Applicants regard as their invention. Specifically, claim 1 has been amended to recite "consisting of" rather than "having." Support for the amendment to claim 1 is found throughout the specification as filed and as more fully set forth below. Therefore, no new matter has been added by way of these amendments.

Applicants are pleased to acknowledge that claims 2, 3, 4 and 20 have not been rejected in the present Office Action, and therefore Applicants conclude that these claims are in condition for allowance.

Rejection of claims 5-7 pursuant to 35 U.S.C. § 112, second paragraph

Claims 5-7 have been rejected under 35 U.S.C. § 112, second paragraph, as allegedly indefinite for failing to point out and distinctly claim the subject matter, which the Applicants regard as the invention. Specifically, the Examiner asserts that the phrase "affecting a biological process" is unclear in how the biological process is affected.

While not necessarily agreeing with the Examiner's rejection that claims 5-7 are indefinite, Applicants, in a good faith effort to expedite the prosecution of the instant application, have canceled claims 5-7 herein, thereby rendering this rejection moot.

Rejection of claims 5-10 and 17-19 pursuant to 35 U.S.C. § 112, first paragraph

The Examiner has maintained his rejection of claims 5-10 and 17-19 under 35 U.S.C. § 112, first paragraph, as not being enabled by the specification as filed. Specifically, the Examiner alleges that the specification does not reasonably provide enablement for **any** peptide comprising EEIIMD beyond SGTVASSSTAVIVSARSAPEEIIMD, that affects biological processes such as angiogenesis, organogenesis, ovulation, inflammation, cancer, tumor cell invasion, and atherosclerosis. Applicants, while not necessarily agreeing with the Examiner's reasoning, but rather in a good faith effort to expedite the prosecution of the present application have canceled claims 5-10 and 17-19 herein, thereby rendering this rejection moot.

Rejection of claims 1, 5-6, 8, 10 and 17 pursuant to 35 U.S.C. § 102(b)

The Examiner has maintained his rejection of claims 1, 5-6, 8, 10 and 17 under 35 U.S.C. §102(b) as being anticipated by Pannekoek (International Publication No. WO 91/05048). Specifically, the Examiner is of the opinion that Pannekoek teaches the peptide sequence SGTVASSSTAVIVSARSAPEEIIMD, which can be used in fibrinolytic/thrombolytic therapy. The Examiner further contends that Pannekoek teaches that the peptide inhibits thrombin in the absence or presence of vitronectin, and thus the peptide affects a biological process and prevents PAI-1 depended adhesion. In view of the cancellation of claims 5-10 and 17-19, this rejection is addressed only with respect to claim 1.

It is well-settled law that "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." MPEP §2131 (quoting Verdegaal Bros. v. Union Oil Co. of Calif., 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)). "The identical invention must be shown in as complete detail as is contained in the . . . claim." Id. (quoting Richardson v. Suzuki Motor Co., 9 USPQ2d 1913, 1920 (Fed. Cir. 1989) (emphasis added). Accordingly, in order to anticipate the claimed invention, Pannekoek must teach each and every element of the claims in order to anticipate these claims under 35 U.S.C. §102(b).

Further, Applicants have amended claim 1 to contain the language "**consisting of**" rather than "having." By way of the present amendment of claim 1, Pannekoek does not teach each and every element of the present invention. Support for this amendment is found throughout the specification, specifically in Example 1 on page 31, beginning on line 12, where the peptide consisting of the amino acid sequence EEIIMD is extensively taught. Thus this

amendment introduces no new matter. Therefore, Applicants respectfully submit that claim 1 following entry of the present amendment is no longer anticipated by Pannekoek and request that the rejection of claim 1 under 35 U.S.C. § 102(b) be reconsidered and withdrawn.

Rejection of claims 7, 9, 18-19 pursuant to 35 U.S.C. § 103(a)

The Examiner has rejected claims 7, 9, 18-19 under 35 U.S.C. § 103(a), as being unpatentable over Pannekoek as applied to claims 1, 5-6, 8, 10 and 17 of the application identified above prior to the present Amendment. While not necessarily agreeing with the Examiner's reasoning, Applicants, in a good faith effort to expedite the prosecution of the instant application, have canceled claims 7, 9, 18-19 herein, thereby rendering this rejection moot.

Summary

Applicants respectfully submit that each rejection of the Examiner to the claims of the present application has been overcome or rendered moot, and that each of the claims 1-4, and 20 is in condition for allowance. Such allowance is requested at the earliest possible date.

Respectfully submitted,

CINES *ET AL.*

April 24, 2003
(Date)

By: 

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KD/RMA/QDN
Enclosures: Petition for one-month extension of time and fee therefor
Marked-up version of the claims to show changes made
Clean copy of the claims under consideration after entry of present Amendment

Marked-up copy of the claims to show changes made

Please cancel claims 5-10 and 17-19 and amend claim 1 as follows:

1. (Amended) A composition comprising a peptide ~~having~~consisting of the amino acid sequence $X_1X_2X_3X_4X_5X_6X_7X_8$, wherein:

X_1 is hydrogen, an amino-terminal blocking group, or one to twenty amino acid residues;

X_2 is an amino acid selected from the group consisting of D, E, H, K, and R;

X_3 is an amino acid selected from the group consisting of E and D;

X_4 is an amino acid selected from the group consisting of I, L, and V;

X_5 is an amino acid selected from the group consisting of I, L, and V;

X_6 is an amino acid selected from the group consisting of M;

X_7 is an amino acid selected from the group consisting of D, E, H, K, and R; and

X_8 is hydrogen, a carboxyl-terminal blocking group, or one to twenty amino acid residues.

Clean copy of the claims under consideration after entry of the present Amendment

1. (Amended) A composition comprising a peptide consisting of the amino acid sequence $X_1X_2X_3X_4X_5X_6X_7X_8$, wherein:
X_1 is hydrogen, an amino-terminal blocking group, or one to twenty amino acid residues;
X_2 is an amino acid selected from the group consisting of D, E, H, K, and R;
X_3 is an amino acid selected from the group consisting of E and D;
X_4 is an amino acid selected from the group consisting of I, L, and V;
X_5 is an amino acid selected from the group consisting of I, L, and V;
X_6 is an amino acid selected from the group consisting of M;
X_7 is an amino acid selected from the group consisting of D, E, H, K, and R; and
X_8 is hydrogen, a carboxyl-terminal blocking group, or one to twenty amino acid residues.

2. The composition of claim 1, wherein:
X_1 is hydrogen or an amino-terminal blocking group;
X_2 is an amino acid selected from the group consisting of D, E, and R;
X_3 is an amino acid selected from the group consisting of D and E;
X_4 is I;
X_5 is I;
X_6 is M;
X_7 is an amino acid selected from the group consisting of D and E; and
X_8 is hydrogen or a carboxyl-terminal blocking group.

3. The composition of claim 1, wherein:
X_1 is hydrogen;
X_2 is E;
X_3 is E;
X_4 is I;
X_5 is I;
X_6 is M;
X_7 is D; and
X_8 is hydrogen.

4. The composition of claim 1, further comprising a pharmaceutically acceptable carrier.

20. (Amended) A kit comprising a peptide having the amino acid sequence $X_1X_2X_3X_4X_5X_6X_7X_8$, wherein:
X_1 is hydrogen, an amino-terminal blocking group, or one to twenty amino acid residues;
X_2 is an amino acid selected from the group consisting of D, E, H, K, and R;
X_3 is an amino acid selected from the group consisting of E and D;
X_4 is an amino acid selected from the group consisting of I, L, and V;
X_5 is an amino acid selected from the group consisting of I, L, and V;
X_6 is an amino acid selected from the group consisting of M;
X_7 is an amino acid selected from the group consisting of D, E, H, K, and R; and
X_8 is hydrogen, a carboxyl-terminal blocking group, or one to twenty amino acid residues, and an instructional material for using the kit.